

DR WPT; 1998-558264/48

DE

XX New cDNA sequence responsible for controlling side shoot and/or
 PT abscission zone formation - used in sense orientation to increase
 PT bushiness of e.g. antirrhinums or in antisense orientation to reduce
 PT side shoot formation in e.g. tomatoes
 XX
 PS Claim 1; Fig 5; 21pp; German.
 CC This sequence encodes the LS protein from *Lycopersicon esculentum*
 CC which is responsible for controlling side shoot and/or abscission zone
 CC formation. LS cDNA can be used in sense orientation to increase the
 CC bushiness of ornamental plants (e.g. antirrhinums) or in antisense
 CC orientation or in ribozyme form to reduce side shoot formation
 CC in crop plants (e.g. tomatoes).
 CC
 SQ Sequence 1729 BP; 487 A; 372 C; 294 G; 576 T; 0 other;

Query Match 100.0%; Score 1729; DB 19; Length 1729;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 1729; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 cctctgctctcccccaggtcccttttttctctctctctctctcttcttctt 60
 DB 1 cctctgctctcccccaggtcccttttttctctctctctctcttcttctt 60
 QY 61 tctaagcatattcttctctctctctctctctctctctctctctctctct 120
 DB 61 tctaagcatattcttctctctctctctctctctctctctctctctctct 120
 QY 121 attgaatgatagtttagatccttctctctctctctctctctctctctct 180
 DB 121 attgaatgatagtttagatccttctctctctctctctctctctctctct 180
 QY 181 tgaagaatctctgcagcatcatcaacagcgtatgattcacgcgtactgta 240
 DB 181 tgaagaatctctgcagcatcatcaacagcgtatgattcacgcgtactgta 240
 QY 241 caccacacacatcaactacacacacacacacacacacacacacacacac 300
 DB 241 caccacacacatcaactacacacacacacacacacacacacacacacac 300
 QY 301 ggagtgatttcgacgagcattctcgcgcgcgcgcgcgcgcgcgcgcgcgc 360
 DB 301 ggagtgatttcgacgagcattctcgcgcgcgcgcgcgcgcgcgcgcgcgc 360
 QY 361 taactcatctccttcttggtatcaactgaaaggttagtccatcaatttact 420
 DB 361 taactcatctccttcttggtatcaactgaaaggttagtccatcaatttact 420
 QY 421 ttcccttcgctcaacgcgtatataatgtaaaccaacacatttcaatgacgt 480
 DB 421 ttcccttcgctcaacgcgtatataatgtaaaccaacacatttcaatgacgt 480
 QY 481 aacaactcaactatctctctctctctctctctctctctctctctctctct 540
 DB 481 aacaactcaactatctctctctctctctctctctctctctctctctctct 540
 QY 541 atctctaaacgaagttaccctcttcaataaggtttaccatcaacgcgtat 600
 DB 541 atctctaaacgaagttaccctcttcaataaggtttaccatcaacgcgtat 600
 QY 601 tttagaagcgtttaacggttaacatcaacgcgtatgaaaggtttgacat 660
 DB 601 tttagaagcgtttaacggttaacatcaacgcgtatgaaaggtttgacat 660
 QY 661 cggggttcaatgacgcgtttaatgaaagcagcagcgtatgaaaggtttgac 720
 DB 661 cggggttcaatgacgcgtttaatgaaagcagcagcgtatgaaaggtttgac 720
 QY 721 tgaatacccggttactgtaaatgacgttatacctctgtagaagagtgatgac 780
 DB 721 tgaatacccggttactgtaaatgacgttatacctctgtagaagagtgatgac 780

QY 781 taaattgcaaccatcaaggttagagatttcaattccatctctcttataagccataa 840
 DB 781 taaattgcaaccatcaaggttagagatttcaattccatctctcttataagccataa 840
 QY 841 taaccacgatacagatgaagatccctctctctctctctctctctctctctct 900
 DB 841 taaccacgatacagatgaagatccctctctctctctctctctctctctctct 900
 QY 901 aaccctagctatcaactgttcttctctctctctctctctctctctctctct 960
 DB 901 aaccctagctatcaactgttcttctctctctctctctctctctctctctct 960
 QY 961 aaggtatttttgcagaggttaagtcacatgaacccaatgttacaatcgcgagaa 1020
 DB 961 aaggtatttttgcagaggttaagtcacatgaacccaatgttacaatcgcgagaa 1020
 QY 1021 ggaagcaaatcaataaccacccctcttcttcaagaatcatcgagcggttgat 1080
 DB 1021 ggaagcaaatcaataaccacccctcttcttcaagaatcatcgagcggttgat 1080
 QY 1081 tacaagctgtttagtattcaactgaagcattatgacacgcggtagtcgagagatgac 1140
 DB 1081 tacaagctgtttagtattcaactgaagcattatgacacgcggtagtcgagagatgac 1140
 QY 1141 agtgaacaaagtgtgttggagagagatgttgatatacgttgcgatavgaaagataa 1200
 DB 1141 agtgaacaaagtgtgttggagagagatgttgatatacgttgcgatavgaaagataa 1200
 QY 1201 aaggaagaagaacatgaaggttttagatcatgaggaatttagagaggttgat 1260
 DB 1201 aaggaagaagaacatgaaggttttagatcatgaggaatttagagaggttgat 1260
 QY 1261 tagtaagtgtttagtccctctctctctctctctctctctctctctctctctct 1320
 DB 1261 tagtaagtgtttagtccctctctctctctctctctctctctctctctctctct 1320
 QY 1321 ttatcctctgaaagctatacaactcggaggttgcgagaaactcaaatagccaact 1380
 DB 1321 ttatcctctgaaagctatacaactcggaggttgcgagaaactcaaatagccaact 1380
 QY 1381 aaatcaaccccttctctctctctctctctctctctctctctctctctctct 1440
 DB 1381 aaatcaaccccttctctctctctctctctctctctctctctctctctctct 1440
 QY 1441 tcaagaggttaattagactatgatttagagagagatctgaaagaacgcgtgagtg 1500
 DB 1441 tcaagaggttaattagactatgatttagagagagatctgaaagaacgcgtgagtg 1500
 QY 1501 aaaaaccccaataaaccagatttctcaatgaaggtttagtagtaaatcttgcaatg 1560
 DB 1501 aaaaaccccaataaaccagatttctcaatgaaggtttagtagtaaatcttgcaatg 1560
 QY 1561 gaaacatatgaaagagatgaaattcattctctctctctctctctctctctct 1620
 DB 1561 gaaacatatgaaagagatgaaattcattctctctctctctctctctctctct 1620
 QY 1621 tgttttaaaattttaaactagagagactaggtttagtataatgtaacta 1680
 DB 1621 tgttttaaaattttaaactagagagactaggtttagtataatgtaacta 1680
 QY 1681 gttcttgtaacgcaagcttgatcaactatatttttttaatta 1729
 DB 1681 gttcttgtaacgcaagcttgatcaactatatttttttaatta 1729

RESULT
 2
 AAF58252/c
 ID AAF58252 standard; DNA; 936 BP.
 XX AAF58252;
 AC
 XX
 DT 24-APR-2001 (first entry)

```
XX Oligonucleotide D1835.
DE
XX Electron-transfer group: ETM; mismatch; genotyping;
KM gene expression; ss.
XX
OS Synthetic.
PN WO200107665-A2.
PD 01-FEB-2001.
PF 26-JUL-2000; 2000WO-US20476.
PR 26-JUL-1999; 99US-0145695.
PR 17-MAR-2000; 2000US-0190259.
XX
PA (CLIN-) CLINICAL MICRO SENSORS INC.
PI
PI Umek RM;
XX WPI: 2001-159728/16.
DR
XX Nucleic acids containing electron-transfer group, useful as labels in
PT hybridization assays, e.g. for genotyping, allowing repeat analyses on
PT a single surface.
XX
PS Example 6; Page 127; 159pp; English.
XX
XX The present invention relates to a composition comprising two nucleic
CC acids each containing an electron-transfer group (ETM) having
CC different redox potentials. The invention is used for electronic
CC detection of nucleic acids, especially of substitutions (mismatches)
CC and single-nucleotide polymorphisms, e.g. for genotyping.
CC monitoring gene expression.
XX
SQ Sequence 936 BP; 4 A; 139 C; 10 G; 7 T; 776 other;

Query Match      8.6%; Score 149; DB 22; Length 936;
Best Local Similarity 1.0%; Pred. No. 3e-25;
Matches 8; Conservative 503; Mismatches 268; Indels 0; Gaps 0;

QY 951 gcgaaagtaagatttttgcataaggttaagtaacataacctaattgttaca 1010
DB 789 GCGMWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 730
QY 1011 tcgcggaagaaacataacataccctcttttttacaagaattcgcgcgt 1070
DB 729 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 670
QY 1071 tgcattattacagctgtgttgcattcactggaagcattcgcacgcgtagtcga 1130
DB 669 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 610
QY 1131 agagagatgacagttgaaacagtggttgaggagagagattggtatcgttgagag 1190
DB 609 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 550
QY 1191 aagagaataaagaaagacataagaaagttatagatacgtggaagttgttgaaga 1250
DB 549 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 490
QY 1251 gttcgtgattagtaagttccttaagcccttgcatacacaagctaagctctt 1310
DB 489 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 430
QY 1311 tgagactcatcattccttcgaagcgtacataacgcgagtttcgagtaattcttct 1370
DB 429 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 370
QY 1371 taagttgcaaatcaacccttctccatctcgtcttgagcgttgagaaaaactaca 1430
DB 1371 taagttgcaaatcaacccttctccatctcgtcttgagcgttgagaaaaactaca 1430
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DB 369 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 310
QY 1431 atagccaactcagaggttaattagactactgatttgaggaggtccgaagaac 1490
DB 309 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 250
QY 1491 gcgtggagtgaaacccaataacagatttctaatgaaattgtagtagaattt 1550
DB 249 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 190
QY 1551 gcatggtgaagaacataatgaagagatcgaattcattcatttttttactta 1610
DB 189 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 130
QY 1611 ttgatatgaattttaaattttaaatacagagactaggttgatgatatattt 1670
DB 129 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 70
QY 1671 aagtaactagctttgtataacgcaagatcttgacaactattttatttaata 1729
DB 69 WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW 11
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RESULT 3
AAF58254/c
ID AAF58254 standard; DNA; 936 BP.
AC
XX AAF58254;
XX
XX 24-APR-2001 (first entry)
XX
XX Oligonucleotide D1875.
XX
XX Electron-transfer group; ETM; mismatch; genotyping;
KW gene expression; ss.
XX
XX Synthetic.
XX OS
XX WO200107665-A2.
XX PN
XX 01-FEB-2001.
XX PD
XX 26-JUL-2000; 2000WO-US20476.
XX PF
XX 26-JUL-1999; 99US-0145695.
XX PR
XX 17-MAR-2000; 2000US-0190259.
XX
XX (CLIN-) CLINICAL MICRO SENSORS INC.
XX
XX Umek RM;
XX WPI: 2001-159728/16.
XX
XX Nucleic acids containing electron-transfer group, useful as labels in
PT hybridization assays, e.g. for genotyping, allowing repeat analyses on
PT a single surface.
XX
PS Example 6; Page 127; 159pp; English.
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CC acids each containing an electron-transfer group (ETM) having
CC different redox potentials. The invention is used for electronic
CC detection of nucleic acids, especially of substitutions (mismatches)
CC and single-nucleotide polymorphisms, e.g. for genotyping.
CC monitoring gene expression.
XX
SQ Sequence 936 BP; 4 A; 144 C; 7 G; 5 T; 776 other;

Query Match      8.6%; Score 149; DB 22; Length 936;
Best Local Similarity 1.0%; Pred. No. 3e-25;
Matches 8; Conservative 503; Mismatches 268; Indels 0; Gaps 0;
```



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Oy      1611 ttgataatgaattttaaatttttaacatagagaccagtgtgatatatagattt 1670
Db      129 ttttttttttttttttttttttttttttttttttttttttttttttttttttttttt 70
Oy      1671 aagtaactagtccttgttatacgaagaatcttgatacaactatttattaata 1729
Db      69 ttttttttttttttttttttttttttttttttttttttttttttttttttttttttt 11

RESULT 5
ID AAF58259/C
XX AAF58259 standard; DNA; 936 BP.
AC AAF58259;
XX
XX
XX 24-APR-2001 (first entry)
XX
XX Oligonucleotide D2004.
XX
XX Electron-transfer group: ETM; mismatch; genotyping;
KW gene expression; ss.
XX
XX Synthetic.
OS
XX WO200107665-A2.
XX
XX 01-FEB-2001.
XX
XX 26-JUL-2000; 2000WO-US20476.
XX
XX 26-JUL-1999; 99US-0145695.
PR 17-MAR-2000; 2000US-0190259.
XX
XX (CLIN-) CLINICAL MICRO SENSORS INC.
PA
XX UmeK RM;
XX
XX WPI: 2001-159728/16.
XX
XX Nucleic acids containing electron-transfer group, useful as labels in
XX hybridization assays, e.g. for genotyping, allowing repeat analyses on
XX a single surface -
PT
XX
XX Example 6; Page 128; 159pp; English.
XX
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CC different redox potentials. The invention is used for electronic
CC detection of nucleic acids, especially of substitutions (mismatches)
CC and single-nucleotide polymorphisms, e.g. for genotyping,
CC monitoring gene expression.
CC
XX Sequence 936 BP; 6 A; 138 C; 8 G; 8 T; 776 other;
XX
XX
Query Match          8.6%; Score 149; DB 22; Length 936;
Best Local Similarity 1.0%; Pred.No.3e-25; 268; Indels 0; Gaps 0;
Matches 8; Conservativity 503; Mismatches 268; Indels 0; Gaps 0;

Oy      951 gcgaagaagttaaggatttttgcctaagggttaagtcgaatgaacctaaatgttacaa 1010
Db      789 GCWWWWWWWMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 730
Oy      1011 tcgcggagagaagaacaatacatcacatccctcttttttacaaaagatcatcgagcgct 1070
Db      729 WWWWWWWWMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 670
Oy      1071 tggattatatacaactggtgttgattcactgtagaacgtacactgccaccggtagtcgag 1130
Db      669 WWWWWWWWMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM 610
Oy      1131 agaaagacgacagtcaacaagctggtgtttggagagagatgttgatatcgttcgattg 1190

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[illegible]


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Db 429 WWWWWW 370
Oy 1371 taggttgcaaatcaaccctttctccatctgctgctgagaaacataca 1430
Db 369 WWWWWW 310
Oy 1431 atagcaactcagaggtaactagactagtagtaggaaggatcgaagaac 1490
Db 309 WWWWWW 250
Oy 1491 gcgtgagtgaaacccaataaccagatttctaagttagtagtagaattc 1550
Db 249 WWWWWW 190
Oy 1551 gcatggtgaagaacatactgaagagtagtaatttcattgttttcttacta 1610
Db 189 WWWWWW 130
Oy 1611 ttgatatgaatgtttaaatcttaacatagagagactaggttgatgataatatt 1670
Db 129 WWWWWW 70
Oy 1671 aagtaactagcttctgataacgaagactctgatacaattatttatttaata 1729
Db 69 WWWWWW 11
```

RESULT 8

AAFS8252 standard; DNA; 936 BP.

AAFS8252;

24-APR-2001 (first entry)

Oligonucleotide D1835.

Electron-transfer group; ETM; mismatch; genotyping;

gene expression; ss.

Synthetic.

MO200107665-A2.

01-FEB-2001.

26-JUL-2000; 2000MO-US20476.

26-JUL-1999; 99US-0145695.

17-MAR-2000; 2000US-0190259.

(CLIN-) CLINICAL MICRO SENSORS INC.

Umek RM;

WPI; 2001-159728/16.

Nucleic acids containing electron-transfer group, useful as labels in hybridization assays, e.g. for genotyping, allowing repeat analyses on a single surface

Example 6; Page 127; 159pp; English.

The present invention relates to a composition comprising two nucleic acids each containing an electron-transfer group (ETM) having different redox potentials. The invention is used for electronic detection of nucleic acids, especially of substitutions (mismatches) and single-nucleotide polymorphisms, e.g. for genotyping, monitoring gene expression.

Sequence 936 BP; 4 A; 139 C; 10 G; 7 T; 776 other;

Query Match 8.4%; Score 145.2; DB 22; Length 936;
Best Local Similarity 0.8%; Pred. No. 2,3e-24;
Matches 6; Conservative 501; Mismatches 269; Indels 0; Gaps 0;

```
Oy 954 aaagttaagatttttttgataggttaagttcaatgaacccaataatttacaatcg 1013
Db 12 WWWWWW 71
Oy 1014 cggagaaggaagcaataataaccatctcttttttcaaaagatcatcgagcgctcg 1073
Db 72 WWWWWW 131
Oy 1074 attatatacagctgtgttgattcaactggaagctacattgccacgggtagtcgagaga 1133
Db 132 WWWWWW 191
Oy 1134 ggaatgacgttgaaagaagtggttggagagagattgtgatalcgttcgatggaag 1193
Db 192 WWWWWW 251
Oy 1194 gagataaagaagaagaagacatgaaagtttagatcatggaagttgttgagagttg 1253
Db 252 WWWWWW 311
Oy 1254 gtgatttagtaattgtcttaagcccttttgatcatcaacaagctagctcttga 1313
Db 312 WWWWWW 371
Oy 1314 gacttcaattcctctcgaagcgtacaaactcgaggttcgagtaattccttctctag 1373
Db 372 WWWWWW 431
Oy 1374 gttagcaaatcaacccttttccatctgctgctgctgctgagaaacatacaata 1433
Db 432 WWWWWW 491
Oy 1434 gccaaactcaagaggttaactagactagtagtttaggaaggatctgaagaacgcg 1493
Db 492 WWWWWW 551
Oy 1494 tggagtgaaaacccaataaaccagatttctaagtgaagttgtagtagaatttga 1553
Db 552 WWWWWW 611
Oy 1554 tggtagaagaacatactgaagaggtatgaaattcaatgcttttttttactattg 1613
Db 612 WWWWWW 671
Oy 1614 ataagatgttttaaatctttaacatagagagactaggttgatgatatagatttaag 1673
Db 672 WWWWWW 731
Oy 1674 ttaactagcttctgataacgaagatcttgatacaattatttatttataata 1729
Db 732 WWWWWW 787
```

RESULT 9

AAFS8254 standard; DNA; 936 BP.

AAFS8254;

24-APR-2001 (first entry)

Oligonucleotide D1875.

Electron-transfer group; ETM; mismatch; genotyping;

gene expression; ss.

Synthetic.

MO200107665-A2.

```

XX 01-FEB-2001.
PD 26-JUL-2000; 2000MO-US20476.
XX 26-JUL-1999; 99US-0145695.
PR 17-MAR-2000; 2000US-0190259.
XX (CLIN-) CLINICAL MICRO SENSORS INC.
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XX WPI: 2001-159728/16.
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XX Example 6; Page 127; 159pp; English.
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Query Match      8.4%; Score 145.2; DB 22; Length 936;
Best Local Similarity 0.8%; Pred. No. 2.3e-24;
Matches 6; Conservative 501; Mismatches 269; Indels 0; Gaps 0;

OY 954 aaaaagtaagatgttttgatagaggttaagtaacccataaattgttacaatcg 1013
DB 12 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 71
OY 1014 cggagaagaagaacatacaccatcctcttttttacaagaatcagagcgctgg 1073
DB 72 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 131
OY 1074 attatacagctgttgatcactcgtgaacatgacccgggtagtcgagaga 1133
DB 132 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 191
OY 1134 gcatgacagttgaacaagtgtgttgaggagagagattgtgatacgttcgagga 1193
DB 192 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 251
OY 1194 gagataaagaagaagaacatgaaaggtttgatacgtggaagtattgtgagga 1253
DB 252 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 311
OY 1254 gtgagattagtaattgtcttaagcccttttgcattacaagaagcttctttga 1313
DB 312 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 371
OY 1314 gactcattatcctctgaaggtacatacagctgagattcgagtaattcttctctag 1373
DB 372 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 431
OY 1374 gtggaataacaccccttttccatctcgtcttgagcgttgagaataactacaata 1433
DB 432 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 491
OY 1434 gccacatccagagggttaactagactagatttagaggagatcgtgaagaacgcg 1493
DB 492 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 551
OY 1494 tggagtgaaacccataacagatttctaatgaagtgtagtaaaatttga 1553
DB 552 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 611

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OY 1554 tggtaagaacaatatgaagaggtatgaattcatgtttttgtttactatg 1613
DB 612 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 671
OY 1614 atataagttttaaattttaacatagagactagttgatataatatttaag 1673
DB 672 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 731
OY 1674 ttaactagctttgtataacgcaagatcttgataactattttattttaata 1729
DB 732 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 787

RESULT 10
AAF58257
ID AAF58257 standard; DNA; 936 BP.
XX
XX AAF58257;
XX 24-APR-2001 (first entry)
XX Oligonucleotide D1954.
XX Electron-transfer group; ETM; mismatch; genotyping;
XX gene expression; ss.
XX Synthetic.
XX WO200107665-A2.
XX
XX 01-FEB-2001.
XX 26-JUL-2000; 2000MO-US20476.
XX 26-JUL-1999; 99US-0145695.
XX 17-MAR-2000; 2000US-0190259.
XX (CLIN-) CLINICAL MICRO SENSORS INC.
XX Umek RM;
XX WPI: 2001-159728/16.
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XX different redox potentials. The invention is used for electronic
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XX and single-nucleotide polymorphisms, e.g. for genotyping,
XX monitoring gene expression.
XX Sequence 936 BP; 5 A; 142 C; 7 G; 6 T; 776 other;

Query Match      8.4%; Score 145.2; DB 22; Length 936;
Best Local Similarity 0.8%; Pred. No. 2.3e-24;
Matches 6; Conservative 501; Mismatches 269; Indels 0; Gaps 0;

OY 954 aaaaagtaagatgttttgatagaggttaagtaacccataaattgttacaatcg 1013
DB 12 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 71
OY 1014 cggagaagaagaacatacaccatcctcttttttacaagaatcagagcgctgg 1073
DB 72 www.wwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwwww 131
OY 1074 attatacagctgttgatcactcgtgaagctacatcgccacgggtagtcgagaga 1133

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Db	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641</
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XX Nucleic acids containing electron-transfer group, useful as labels in
PT hybridization assays, e.g. for genotyping, allowing repeat analyses on
PT a single surface -
XX
PS
PS Example 6; Page 128; 159pp; English.
XX
XX The present invention relates to a composition comprising two nucleic
CC acids each containing an electron-transfer group (ETM) having
CC different redox potentials. The invention is used for electronic
CC detection of nucleic acids, especially of substitutions (mismatches)
CC and single-nucleotide polymorphisms, e.g. for genotyping,
CC monitoring gene expression.
XX
XX Sequence 936 BP; 6 A; 138 C; 8 G; 8 T; 776 other;
50

Query Match	8.4%;	Score 145.2;	DB 22;	Length 936;
Best Local Similarity	0.8%;	Pred. No. 2.3e-24;		
Matches	6;	Conservative 501;	Mismatches 269;	Indels 0;
				Gaps 0;

Oy	954	aaagcttaagatttttgcataagggttaagcattgaacccaactaaattgttacaacg	1013
Dd	12	#####	71
Oy	1014	cgagaaaggaaacaaatcataacatcctctttttaaaagatcatcagcgcttgc	1073
Dd	72	#####	131
Oy	1074	attattatacagctgttcttgattcaactcgtgaagctcattgcacccggttagtcagaga	1133
Dd	132	#####	191
Oy	1134	gagtcagacgttgaaacaagctgtggtttggagagagattgttatatcgttcgactgagag	1199
Dd	192	#####	251
Oy	1194	gagataaaggaaagaaagacatgaaggtttgatcatggaagtatcgttgaggagt	1255
Dd	252	#####	311
Oy	1254	gtgatttagtaatgttgccttgaagccctttgcattatcaagaactaagctctttga	1313
Dd	312	#####	371
Oy	1314	gacttcattatcctctgaaagcctatcaactcggagttcggagttaacttctctcttag	1373
Dd	372	#####	431
Oy	1374	gttcgaaaatcaaaccccttttccatctcgccttcgttcgttgagaaaactacaata	1433
Dd	432	#####	491
Oy	1434	gccaaactcagaaggtaactaagaactatgatagttttagaggagctgaagaaacgcg	1493
Dd	492	#####	551
Oy	1494	tggagtgaaaacccataatacacagatttcttaataagttgtagagagaatttgc	1553
Dd	552	#####	611
Oy	1554	tgggtgaagaaacattgaagaggtatgaaattcatgttttcttgcttaactatg	1613
Dd	612	#####	671
Oy	1614	atatgaatgtttaaaattttaacabagagcctagttgataatagattattaa	1673
Dd	672	#####	731
Oy	1674	ttaactgctcttgtataacgcaagatctgatacaactattttatttaata	1729
Dd	732	#####	787

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RESULT 12
AAFS8262
ID AAF58262 standard; DNA: 936 BP.
XX
AC AAF58262;
XX
DT 24-APR-2001 (first entry)
XX
DE Oligonucleotide D2007.
XX
KW Electron-transfer group; ETM: mismatch; genotyping;
KW gene expression; ss.
XX
OS Synthetic.
XX
PN WO200107665-A2.
XX
PD 01-FEB-2001.
XX
XX 26-JUL-2000; 2000WO-US20476.
XX
XX 26-JUL-1999; 990US-0145695.
XX
XX 17-MAR-2000; 2000US-0190259.
XX
PA (CLIN-) CLINICAL MICRO SENSORS INC.
XX
PI Umek RM;
XX
DR WPI; 2001-159728/16.
XX
PT Nucleic acids containing electron-transfer group, useful as labels in
PT hybridization assays, e.g. for genotyping, allowing repeat analyses on
PT a single surface
XX
PS Example 6; Page 128; 159pp; English.
XX
CC The present invention relates to a composition comprising two nucleic
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CC detection of nucleic acids, especially of substitutions (mismatches)
CC and single-nucleotide polymorphisms, e.g. for genotyping,
CC monitoring gene expression.
XX
SQ Sequence 936 BP; 5 A; 139 C; 10 G; 6 T; 776 other;

Query Match      8.4%; Score 145.2; DB 22; Length 936;
Best Local Similarity 0.8%; Pred. No. 2,3e-24;
Matches 6; Conservative 501; Mismatches 269; Indels 0; Gaps 0;

QY 954 aaagtaagatttttgcataagggttaagcaatgaacccaataattgttacaagc 1013
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 12 www. .... 71
QY 1014 cggagaaggaagcaatcataacatcctcttttttacaagaatcatcgaagcgttgg 1073
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 72 www. .... 131
QY 1074 attattacacgttggttgattcaactgaagctacatgcgcggtaagtcgaaga 1133
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 132 www. .... 191
QY 1134 ggaatgaagttgaacaagtgtgttgaggagaagattgtgatcgttcgaatgaag 1193
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 192 www. .... 251
QY 1194 gagaataaagaaagaaacatgaagaagttatagatcatggaagtattgttgaagc 1253
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 252 www. .... 311
QY 1254 gtggaattgaatgttgcttgaagcccttgcattcacaaagtaagcttcttga 1313
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :

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DB 312 www. .... 371
QY 1314 gactcattatcctctgaagcgtatcaactgcgagtttcgagtaattcttctctag 1373
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 372 www. .... 431
QY 1374 gttgcaaatcaacccttcttcactcgtctgttcggttgagaataacatcaata 1433
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 432 www. .... 491
QY 1434 gccacttcagagggttaattgaactactgatttagaggagatctgaagaacgcg 1493
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 492 www. .... 551
QY 1494 tgaagtgaaacccaataaaccagatttctcaatgaagttgtagtagaatttca 1553
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 552 www. .... 611
QY 1554 tggtagaagaacaatatggaagaggtatgaattcaigtgtttttgttactattg 1613
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 612 www. .... 671
QY 1614 atatgaatgttttaaaatttacaatagaagactaggtgtgatataagatttaag 1673
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 672 www. .... 731
QY 1674 ttaactagcttctgtataacgcaagatcttgatcaactatttatttataa 1729
   : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
DB 732 www. .... 787

RESULT 13
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ID AAF58255 standard; DNA: 938 BP.
XX
AC AAF58255;
XX
DT 24-APR-2001 (first entry)
XX
DE Oligonucleotide D1876.
XX
KW Electron-transfer group; ETM: mismatch; genotyping;
KW gene expression; ss.
XX
OS Synthetic.
XX
PN WO200107665-A2.
XX
PD 01-FEB-2001.
XX
XX 26-JUL-2000; 2000WO-US20476.
XX
XX 26-JUL-1999; 990US-0145695.
XX
XX 17-MAR-2000; 2000US-0190259.
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CC and single-nucleotide polymorphisms, e.g. for genotyping,
CC monitoring gene expression.

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PR 28-JUN-1999; 99US-0140823.
PR 29-JUN-1999; 99US-0140991.
PR 30-JUN-1999; 99US-0141287.
PR 01-JUL-1999; 99US-0141842.
PR 01-JUL-1999; 99US-0142154.
PR 02-JUL-1999; 99US-0142055.
PR 06-JUL-1999; 99US-0142390.
PR 08-JUL-1999; 99US-0142803.
PR 09-JUL-1999; 99US-0142920.
PR 12-JUL-1999; 99US-0143542.
PR 13-JUL-1999; 99US-0143624.
PR 14-JUL-1999; 99US-0144005.
PR 15-JUL-1999; 99US-0144085.
PR 16-JUL-1999; 99US-0144086.
PR 19-JUL-1999; 99US-0144325.
PR 19-JUL-1999; 99US-0144331.
PR 19-JUL-1999; 99US-0144332.
PR 19-JUL-1999; 99US-0144333.
PR 19-JUL-1999; 99US-0144334.
PR 19-JUL-1999; 99US-0144335.
PR 20-JUL-1999; 99US-0144352.
PR 20-JUL-1999; 99US-0144632.
PR 20-JUL-1999; 99US-0144884.
PR 21-JUL-1999; 99US-0144814.
PR 21-JUL-1999; 99US-0145086.
PR 21-JUL-1999; 99US-0145088.
PR 22-JUL-1999; 99US-0145087.
PR 22-JUL-1999; 99US-0145089.
PR 22-JUL-1999; 99US-0145192.
PR 23-JUL-1999; 99US-0145145.
PR 23-JUL-1999; 99US-0145218.
PR 23-JUL-1999; 99US-0145224.
PR 26-JUL-1999; 99US-0145276.
PR 27-JUL-1999; 99US-0145913.
PR 27-JUL-1999; 99US-0145918.
PR 27-JUL-1999; 99US-0145919.
PR 28-JUL-1999; 99US-0145951.
PR 02-AUG-1999; 99US-0146386.
PR 02-AUG-1999; 99US-0146388.
PR 02-AUG-1999; 99US-0146389.
PR 03-AUG-1999; 99US-0147038.
PR 04-AUG-1999; 99US-0147204.
PR 04-AUG-1999; 99US-0147302.
PR 05-AUG-1999; 99US-0147260.
PR 05-AUG-1999; 99US-0147303.
PR 06-AUG-1999; 99US-0147416.
PR 09-AUG-1999; 99US-0147493.
PR 09-AUG-1999; 99US-0147935.
PR 10-AUG-1999; 99US-0148171.
PR 11-AUG-1999; 99US-0148319.
PR 12-AUG-1999; 99US-0148341.
PR 13-AUG-1999; 99US-0148565.
PR 13-AUG-1999; 99US-0148684.
PR 16-AUG-1999; 99US-0149358.
PR 17-AUG-1999; 99US-0149175.
PR 18-AUG-1999; 99US-0149426.
PR 20-AUG-1999; 99US-0149722.
PR 20-AUG-1999; 99US-0149723.
PR 20-AUG-1999; 99US-0149929.
PR 23-AUG-1999; 99US-0149902.
PR 23-AUG-1999; 99US-0149930.
PR 25-AUG-1999; 99US-0150566.
PR 26-AUG-1999; 99US-0150884.
PR 27-AUG-1999; 99US-0151065.
PR 27-AUG-1999; 99US-0151066.
PR 27-AUG-1999; 99US-0151080.
PR 30-AUG-1999; 99US-0151303.
PR 31-AUG-1999; 99US-0151438.
PR 01-SEP-1999; 99US-0151930.
PR 07-SEP-1999; 99US-0152363.

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PR 10-SEP-1999; 99US-0153070.
PR 13-SEP-1999; 99US-0153758.
PR 15-SEP-1999; 99US-0154018.
PR 16-SEP-1999; 99US-0154039.
PR 20-SEP-1999; 99US-0154779.
PR 22-SEP-1999; 99US-0155139.
PR 23-SEP-1999; 99US-0155466.
PR 24-SEP-1999; 99US-0155659.
PR 28-SEP-1999; 99US-0156458.
PR 29-SEP-1999; 99US-0156596.
PR 04-OCT-1999; 99US-0157117.
PR 05-OCT-1999; 99US-0157753.
PR 06-OCT-1999; 99US-0157865.
PR 07-OCT-1999; 99US-0158029.
PR 08-OCT-1999; 99US-0158232.
PR 12-OCT-1999; 99US-0158369.
PR 13-OCT-1999; 99US-0159293.
PR 13-OCT-1999; 99US-0159294.
PR 13-OCT-1999; 99US-0159329.
PR 14-OCT-1999; 99US-0159330.
PR 14-OCT-1999; 99US-0159331.
PR 14-OCT-1999; 99US-0159637.
PR 14-OCT-1999; 99US-0159638.
PR 18-OCT-1999; 99US-0159584.
PR 21-OCT-1999; 99US-0160741.
PR 21-OCT-1999; 99US-0160767.
PR 21-OCT-1999; 99US-0160768.
PR 21-OCT-1999; 99US-0160770.
PR 21-OCT-1999; 99US-0160814.
PR 21-OCT-1999; 99US-0160815.
PR 22-OCT-1999; 99US-0160980.
PR 22-OCT-1999; 99US-0160981.
PR 22-OCT-1999; 99US-0160989.
PR 25-OCT-1999; 99US-0161404.
PR 25-OCT-1999; 99US-0161405.
PR 25-OCT-1999; 99US-0161406.
PR 26-OCT-1999; 99US-0161359.
PR 26-OCT-1999; 99US-0161360.
PR 26-OCT-1999; 99US-0161361.
PR 28-OCT-1999; 99US-0161920.
PR 28-OCT-1999; 99US-0161992.
PR 28-OCT-1999; 99US-0161993.
PR 29-OCT-1999; 99US-0162142.

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Query Match 7.7%; Score 133.6; DB 21; Length 1602;
 Best Local Similarity 52.2%; Pred. No. 1.3e-21;
 Matches 448; Conservative 0; Mismatches 389; Indels 21; Gaps 6;

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QY 560 ccttcataaggttaccatcaatccgctaaccgtaacgatttagagcattaacggt 619
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DB 742 ccttactcaagttctgcactctcagcgatcaacgattccgaagtttccaagg 801
QY 620 aatcatcaagcaatccacatcggttattcgacattaaacggggttcaatggccacg 679
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DB 802 aagaaaagag---ttcattgcatgatttccctatgaatcaaggtcttcaatggcggcg 858
QY 680 ttaatgcaagcactagctgcatgtaacctgtcccatctt---cgaataccgtaact 736
    || | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 859 cttaatgcaagctctgctgcttgcacgtgtgtccctctgtttccggttaaccggaatt 918
QY 737 gg---aaatgacctgataccctcgtagaacaagtgatcggtttagactaaattgtctaac 793
    || | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 919 ggtccacgacgacgacgaataattcgattatctctcatgaagtgggtgtaagctgtgcat 978
QY 794 tcaatgggttagattcaattcaatccctcttatataaccaataaataaccaagatcac 853
    || | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 979 ttatgctgagcgaga---ttacggttagttgtagtacaaggaattgtgtgtaacctta 1035
QY 854 gatgaagatccctctattttccctccatgtgtaacactccctcgatgaacactagctatc 913
    || | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB 1036 gctgattcttgatgcttcgaatgcttgagcttagaaccgaatgagattggaatctgttgcggtt 1095

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OY 914 aactgtgttttctaccctccacgccttttaagaacgcgaaagtaaggattttttg 973
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Db 1096 aacctgttttctcgagcttcaaaagctcttggaagacttggtgacatgaattttt 1155
OY 974 cataggttaagtaacgaacccaataattgttaacatcgcggaaggaagcaaatcat 1033
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1156 ggtgtgtgaatcagatlaaacgcgagatttctactgtgtgtgacgaagatcgaaacct 1215
OY 1034 aaccatcctcttttttcaaaagattatcgagcggttggtattatataacgcgtgttt 1093
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1216 aatagtcggaatttcttaagatcggtttactgaatcgtgtgcatattactcagcgtttgt 1275
OY 1094 gattcactggaagctacatctgcacgcggttagtcgagagagatgacaggttgaacaagt 1153
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1276 gactcgtttggaagt-----gtaccgaagtgttcaagaagaagttca---tgtcggaagtt 1326
OY 1154 tggtttggagagagatgtgtgataatcgttgcgaatggaagagataaaaggaagaaaga 1213
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1327 tacttggttaaacagatctgcaacgttgtgtgtgtgtgacacgcgaggttgagcgt 1386
OY 1214 catgaaggtttaagatcatctgtggaagtatgttgaggaagtttgatgaatgtaagtgtct 1273
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1387 catgaagaagttgaatcagtgaggaacccggttcggtctgtgtgtgtgtgtgtgtgtgtgt 1446
OY 1274 ttaagcccttgcattatcaacgaagtaagcttctcttgagacttcatatcctctgaa 1333
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1447 atgtgttcgaatggttgaagaacgagatgtatgtcttcttggtctgttcaacgcggtgag 1506
OY 1334 ggcatacaactcggagtttcgagtaattcttctcttaagttggtgcaaaatcaacccctt 1393
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1507 ggtatcgcggtggaagagagtgacgctgtctcatgtgtgtgtgtgtgtgtgtgtgtgtgt 1566
OY 1394 ttctccatctgtctgtgtg 1411
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1567 atagccacctcgctgtgtg 1584
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||

RESULT 15
AAT91937
ID AAT91937 standard; DNA; 1964 BP.
XX
AC AAT91937;
DT 19-MAR-1998 (first entry)
XX
DE Arabidopsis thaliana gibberellin insensitivity gene gai.
XX
KW gibberellin insensitivity; gai; plant growth inhibition;
KW dwarf phenotype; lodging resistance; increased yield;
KW flowering regulation; bolting inhibition; spinach; lettuce;
KW antibody; identification; probe; primer; antisense; sense;
KW expression regulation; co-suppression; rice;
KW Bakane disease resistance; ss.
XX
OS Arabidopsis thaliana.
XX
PN W09729123-A2.
XX
PD 14-AUG-1997.
XX
PF 12-FEB-1997; 97WO-GB00390.
XX
PR 12-FEB-1996; 96GB-0002796.
XX
PA (INNE-) INNES CENT INNOVATIONS LTD JOHN.
PI Carol P, Harberd NP, Peng J, Richards DE;
DR WPI: 1997-415295/38.
XX P-PSDB; AAW30792.
XX
PT Nucleic acid encoding gibberellin inhibitor GAI and related
    antisense sequences - used to create tail, or particularly, dwarf

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PT plants, especially crops such as maize, rice and wheat
XX
XX Claim 2; Fig 3; 76pp; English.
XX
CC The present sequence encodes the Arabidopsis thaliana gibberellin
CC insensitivity (gai) gene product (GAI), the expression of which
CC inhibits plant growth. However the inhibition is antagonised by
CC gibberellin (GA), while gai expression confers a dwarf phenotype
CC that is insensitive to GA. Manipulating gai and GAI expression can
CC produce tall or dwarf plants, particularly the latter for increased
CC resistance to lodging and increased yield. It may also allow
CC regulation of flowering, i.e. plants remain in the vegetative state
CC until treated with GA, useful to inhibit bolting in the spinach and
CC lettuce. GAI can be used to raise specific antibodies for
CC identifying homologous proteins or genes in other species. gai
CC fragments can also be used as probes or primers to identify and
CC clone related sequences, or in the preparation of antisense or
CC sense expression regulating (co-suppressing) sequences. Rice plants
CC that express GAI may be resistant to Bakane disease. Manipulation
CC of gai and GAI makes it possible to tailor the degree of dwarfism
CC and GA sensitivity to particular crops or situations.
XX
SQ Sequence 1964 BP; 489 A; 426 C; 474 G; 575 T; 0 other;

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Query Match 7.7%; Score 133.6; DB 18; Length 1964;
Best Local Similarity 52.2%; Pred. No. 1.3e-21;
Matches 448; Conservative 0; Mismatches 389; Indels 21; Gaps 6;

OY 560 ccttcaataagtttaccatcaataacgcgaatcaagcgaatttgaagcgaataacggt 619
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 947 cctatctcaagttcgcctcaattcgcgcgaatcaagcgaatttctgaagcttttcaagg 1006
OY 620 aatcaagaacatccacatcgttgattcgacatlaacacggggttcaatggtccacg 679
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1007 aagaaagag---ttcatgcatatttctctatgagtaagcgaagcttcaatgscgcg 1063
OY 680 ttaagcagacactagcgtacgtgttaacctgtccacctt---cgatcaacggtact 736
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1064 ctatgcagcgtcttgccctgcacacctgtggtccctctgttttcggttcaacggaatt 1123
OY 737 gg---aaatgaccttgatacccttcgtagaacaggtgactgttaagcgaatttctac 793
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1124 ggtccacgcgacgcggaatctgatatcttcaatgaagtgtgtgaagctgtcat 1183
OY 794 tcaataggttgagaattcaattccatctcttatataagcaataaacaacagatcac 853
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1184 ttagctgagcgga---ttcacgltgagttgtagacagagaattgtgtcaacattta 1240
OY 854 gatgaagatcctctatatttcccatgttactaccccgatgaagaacctagctatc 913
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1241 gctgacttgatgctcgatgcttgatgactgaagcgaatgagatcgtgtgtgtgt 1300
OY 914 aactgttttctaccctccacgcgcttttaaaagacgcggaagaattgaagattttttg 973
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1301 aactcgttttcgagcttcaaaagctcttggaacgaacctgtgtgatataagttctt 1360
OY 974 cataggttaagtaacgaacccaataattgttaacatcgcggaaggaagcaaatcat 1033
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1361 ggtgtgtgaatcagatlaaacgcgagatttctactgtgtgtgacgaagatcgaaacct 1420
OY 1034 aaccatcctcttttttcaaaagattatcgaggggttggtattatataacgcgtgttt 1093
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1421 aatagtcggaatttcttaagatcgtgttacggtgtgtgtgtgtgtgtgtgtgtgtgt 1480
OY 1094 gattcactggaagctacatctgcacgcggttagtcgagagagatgacaggttgaacaagt 1153
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1481 gactcgtttggaagt-----gtaccgaagtgttcaagaagaagttca---tgtcggaagtt 1531
OY 1154 tggtttggagagagatgtgtgataatcgttgcgagtgaagagataaaaggaagaaaga 1213
    ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 1532 tacttggttaaacagatctgcaacgttgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgtgt 1591

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